UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re Flint Water Cases   Hon. Judith E. Levy
5:16-cv-10444/17-cv-10164   United States District Judge

_____/

This Motion Relates to:

Bellwether III Cases

_____/

BELLWETHER III PLAINTIFFS' RESPONSE TO VEOLIA'S MOTION TO EXCLUDE THE OPINIONS OF AARON SPECHT, PH.D.

TABLE OF CONTENTS

i

TABLE OF AUTHORITIES

INTRODUCTION

Veolia North America, LLC, Veolia North America, Inc., and Veolia Water

North America Operating Services, LLC (collectively "Veolia") seek to exclude

Plaintiffs' expert Dr. Arron Specht's Testimony (ECF. No 2916).[1] Veolia's motion

is nothing more than a meritless attempt to relitigate issues already decided by this

Court; a classic battle of the experts; and an attack on Dr. Specht's conclusions, none

of which provides a basis for the drastic remedy of exclusion. Accordingly, the Court

should deny Veolia's motion to exclude Dr. Specht's opinions in its entirety.

BACKGROUND

Dr. Specht is a highly credentialed and well respected professional in the field

of Environmental and Occupational Health, Medical Physics, Health Physics, and

Epidemiology.[2] He has dedicated his career to researching the development,

validation, and application of a non-invasive X-ray Fluorescence (XRF) technology

to quantify heavy metals in human bone. Through that work, he has become the

leading expert on the use of portable x-ray fluorescence technology ("pXRF") to

assess metal exposures, such as lead, in children and adults in vivo.

Plaintiffs' counsel retained Dr. Specht to evaluate Flint children's exposure to

lead using the pXRF technology. He evaluated thousands of children, including the

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[1] Unless indicated otherwise, citations to ECF No. refers to docket entries in
Case No. 5:16-cv-14444.

[2] Dr. Specht's credentials are not in dispute.

fourteen Bellwether Plaintiffs (Bellwether I and Bellwether III), and determined lead

levels and associated uncertainty values for each. For the Bellwether III Plaintiffs,

Dr. Specht universally found the lead accumulated in Plaintiffs' bones reflected a

"substantial exposure" to lead.

In his Bellwether I report, he explained that, on average, the children of Flint

whom he had tested had higher bone lead levels than those he observed in prior

studies of children in Canada and China. In his Bellwether III report, Dr. Specht

elaborated on this point with regard to the China study. He applied a conservative

estimate of five years for the bone-lead half-life in children and compared the

population overlap with the lead poisoned children from the China study to conclude

that 66% of the children from Flint had bone lead and lead exposure profiles most

similar to *severely poisoned* children from that study. *See* Veolia Ex. 4, Dr. Specht

BWIII Report.

Throughout the course of the Flint Water Crisis litigation, the Court has

become quite familiar with Dr. Specht's work and methodology. In the context of

approving the partial settlement between Plaintiffs, the State, and others, the Court

assessed Dr. Specht's methodology and determined it was reliable in assessing lead

level exposures. Case No. 5:16-cv-10444-JEL-EAS ECF ECF No. 2008, ("Order

Granting Final Approval of Partial Settlement") at PageID.69634–655.[3] In

Bellwether I, the Court carefully rejected Veolia's complaints that Dr. Specht's

methodology failed the *Daubert* reliability factors. Case No. 5:17-cv-10164-JEL-

KGA ECF No. 447 ("BWI Order") at PageID.35603–607.[4]

Specifically, Veolia argued that Dr. Specht's methods were unreliable because

they could not be replicated. The Court rejected this argument, explaining that:

"*Daubert* does not require that any individual test-result is replicable—let alone that

defendants in this case should be able to replicate it." *Id.* at PageID.35610. Rather,

the relevant question is whether the technique or technology can be tested and

"[c]learly the use of the pXRF device to measure bone lead content can be and has

been tested, for instance, when researchers compared pXRF to KXRF results." *Id.* at

PageID. 35611 (citing Specht (2014), Specht (2019a), Specht (2019b)).

Veolia also argued previously that Dr. Specht's uncertainty values were prone

to error. But the Court explained that: "The core of the *Daubert* inquiry is to

determine whether a particular theory, technique, or technology is sufficiently

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[3] This assessment included, inter alia, overruling objections that the pXRF methodology could not be used because it was not FDA approved. *Id.* at PageID.69638.

[4] Because Dr. Specht applied the exact same methodology in determining the bone lead measurements for the Bellwether III children as he did for the Bellwether I children, Plaintiffs incorporate by reference the Court's comprehensive summary of Dr. Specht's methodology as well as the description of his various related studies. BWI Order at PageID.35603–607.

scientific to be reliable—not whether a specific set of measurements is accurate." *Id.* at 35613.[5] The Court further explained that "Published, peer-reviewed research treats the error rates derived from pXRF spectrometry data as reliable." *Id.* at PageID. at 35615 (citing Zhang (2021); Specht (2019a)). And that even if the error rates were determined in an inadequate way, this alone would not justify exclusion of the evidence. *Id.* at PageID. 35616.

Overall, the Court concluded that Veolia's arguments regarding Dr. Specht's methodology and application of the pXRF technology did not warrant exclusion under *Daubert*; instead, their criticisms would be better resolved at trial by the jury. *Id.* at PageID. 35619 ("Even if Defendants are right that Dr. Specht's findings are inaccurate or prone to error, the remedy is to mount an effective defense at trial, not to exclude the testimony altogether.") (citation omitted).

Since the Court's decision, Veolia has endeavored to create a battle of the experts regarding Dr. Specht's methods for calculating bone lead levels and

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[5] The Court also observed that: "[D]ata from the pXRF device itself can be used to determine the level of uncertainty associated with each measurement, and such determinations can be made using uncontroversial methods that have been subjected to peer review. . . This data was collected for each [Bellwether I] Plaintiff, and the uncertainty was low." *Id.* at PageID.35614. The same is true for the Bellwether III Plaintiffs, all of whom have uncertainty values below 10 μg/g. *See* Veolia Ex. 4, Dr. Specht BWIII Report.

uncertainty values. Pivoting from their prior position that Dr. Specht's work was untestable, Veolia engaged an expert, Dr. Huber,[6] to test Dr. Specht's conclusions.

At the outset, Dr. Huber explained that he attempted to replicate Dr. Specht's calculations of bone lead levels and uncertainty values but was "unable to do so" without the MATLAB code used by Dr. Specht. ECF No. 2380-3 at ¶7, ¶8, ¶9. Although the method for calculating these values is clearly set forth in Dr. Specht's publications (and thus the MATLAB code was not necessary to reproduce his work), Dr. Specht produced the code to aid Dr. Huber. Dr. Specht also spoke with Dr. Huber, explaining how to run the code using the format provided and was deposed (again), at which time he laid out, step-by-step, explanations regarding calculations conducted through use of the MATLAB code. Thereafter, Dr. Huber issued reports and a declaration purporting to have tested Dr. Specht's conclusions and determining that they are inaccurate and error prone. Based on that work, Veolia engaged another expert, Dr. Hesselink,[7] who did not review the code himself, and merely relied on

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[6] Dr. Huber is not an expert in use of the pXRF in humans, nor has he published any studies or research on the subject. That said, he does "believe the pXRF can be used to demonstrate lead within a human." Ex. A, (Dr. Huber Dep.) at 138:15-18.

[7] Dr. Hesselink is also not an expert in use of the pXRF in humans, nor has he published any studies or research on the subject. Notably, he did not review the MATLAB code himself or conduct any of his own analysis. He instead relied on the "files [] generated by Dr. Huber from running Dr, Specht's code." Veolia Ex. 4, Hesselink Decl. at ¶9.

Dr. Huber's work to opine that Dr. Specht's conclusions raise several "red flags." Veolia Ex. 4, Hesselink Decl. at ¶10.

Dr. Specht responds to these criticisms in a declaration, refuting each point in detail and explaining broadly that Dr. Huber's and Dr. Hesselink's "criticisms are not only incorrect, but they demonstrate that Dr. Huber and Dr. Hesselink both share a fundamental misunderstanding of the generally accepted principals of physics and statistics being applied here." Ex. B, (Dr. Specht's Decl.) at ¶18 (referred herein as "Specht Decl."). In essence, Dr. Specht explains that Dr. Huber and Dr. Hesselink both share a misunderstanding in thinking that lead must *always present* in a certain "lead fingerprint," and both disregard the generally accepted application of a counting statistics method to determine lead quantities in a human sample. *See generally* Specht Del. at ¶¶18–32.

Veolia relies on Dr. Huber's and Dr. Hesselink's flawed opinions to argue that Dr. Specht's MATLAB code is not a reliable methodology for identifying low levels of lead in children's bones. Veolia further takes issue with Dr. Specht's conclusion that the children of Flint's bone lead levels are comparable to those of the severely poisoned children form the study published regarding lead poisoned populations in China. However, these arguments do not establish a basis for exclusion. Rather, overall, what Veolia mainly presents is a battle of the experts, asking the Court to believe their experts are more credible than Dr. Specht regarding the methodology

and its application, which he has studied and published about for over a decade. Veolia's remaining arguments similarly do not warrant exclusion as they either repackage those previously rejected by this Court or raise issues that go to the weight of Dr. Specht's testimony rather than its admissibility.

LEGAL STANDARD

As the Supreme Court explained in Daubert, Rule 702 imposes a "gatekeeping" obligation on the courts to ensure that scientific testimony "is not only relevant, but reliable." *Daubert v. Merrell Dow Pharms., Inc*, 509 U.S. 579, 589 (1993); *see also Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 147 (1999). But this gatekeeping function is not intended to displace the jury or the adversarial system: "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert,* 509 U.S. at 596.

ARGUMENT

I. DR. SPECHT APPLIES A PEER REVIEWED, TESTABLE, RELIABLE, AND GENERALLY ACCEPTED METHODOLOGY IN USING THE MATLAB CODE TO CALCULATE LEAD VALUES

A. The Underlying Methods of the MATLAB Code Have Been Subject to Peer Review and Publication

Veolia argues that Dr. Specht has "never shown [his] [MATLAB] code to anyone[,]" and that it "has never been subjected to peer review or publication." Br. at 9–10. But Veolia overstates and mispresents the importance of the Flint specific

7

MATLAB code. As Dr. Specht explains, it is of no concern that Dr. Linda Nie or Dr. Xinxin Zhang might not have seen the Flint specific code.[8] Specht Decl. at ¶13. This is because the part of the code that makes up the methodology being applied to calculate lead levels——the curve fitting procedure to obtain counts and counting statistics——has not only been shared with his colleagues but is used widely by them in their **published** work. And the Flint specific parts of the MATLAB code are related only to calibrating that specific pXRF device and are wholly unrelated to the underlying methodology. *Id.* at ¶¶13–16; *see also* Ex. C, (Specht 2023 Dep) at 25:12–26:16.

As to peer review, Dr. Specht has consistently explained that "the contention that the specific MATLAB code itself needs to be peer reviewed is completely foreign in the field of XRF research." Specht at ¶17. Rather, the researcher "typically submit[s] the data that the code is producing, which has been submitted for peer review [for] different journal articles." Ex. D, (Specht 2024 Dep.) at 102:11-18. Moreover, Dr. Specht explains that the *underlying methodology* that the code is applying has been consistently applied in multiple peer reviewed XRF studies. Specht Decl. at ¶¶13–15. This is more important to the *Daubert* reliability inquiry than the Flint specific MATLAB code being peer reviewed itself. *See Deepwell*

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[8] *See* Veolia Ex. 5, Specht 2023 Dep at 64:10-14 ("Not that specific code, no."); 67:5-10 (A: "Not the specific code, no."); 327:17–328:18 ("No, I don't think [Professor Nie or Mr. Zhang] have access to the Flint Code, no.").

Energy Servs., LLC, No. 1:20-CV-141, 2021 U.S. Dist. LEXIS 261311, at *32 (E.D. Tex. June 14, 2021) ("[T]he *Daubert* factor that focuses on peer review and publication does not concern whether the expert's proffered report is peer-reviewed, but, instead, whether 'the theory or technique used by the expert has been subjected to peer review and publication.'") (citation omitted).

Finally, the lack of peer review of Dr. Specht's MATLAB code "does not necessarily render his testimony inadmissible." *Davis v. CSX Transp.*, Inc., Civil Action No. 1:10CV74, 2011 U.S. Dist. LEXIS 150058, at *10–11 (N.D.W. Va. Dec. 30, 2011) (citing *Daubert*'s reasoning regarding publication and peer review); *see also United States v. Nasir*, No. 5:12-CR-102-JMH, 2013 U.S. Dist. LEXIS 138621, at *9 ("To the extent that these studies were subject to internal, rather than external peer review, that information relates more to the weight given to the evidence and will not prevent the evidence from admission in this instance."); *Jesa Enters. v. Thermoflex Corp.*, 268 F. Supp. 3d 968, 974 (E.D. Mich. 2017) ("[Expert's opinions about industry practices and customs are not unreliable simply because they have not been subjected to the crucible of peer review[.]") (cleaned up) (citation omitted).

B.   The MATLAB Code Calculates Reliable Uncertainty Values

Veolia purports that their experts have identified errors in the MATLAB code, which reveal that Dr. Specht's "code has extraordinarily high error rates." Br. at 11.

This argument misunderstands the error rate factor, and impermissibly asks the Court to resolve a battle of the experts.

First, the rate of error factor is primarily focused on whether **the expert** "identifies" an error rate and takes it into account in their assessment. *United States v. Mitchell*, 365 F.3d 215, 241 (3d Cir. 2004). Here, Dr. Specht does just that. Indeed, as the Court recognized in Bellwether I, Dr. Specht **identifies** and considers reliable error rates for **each bone lead** measurement. BWI Order at PageID.35615 ("Error rates were provided for each measurement taken in this case and they were low. Published, peer-reviewed research treats the error rates derived from pXRF spectrometry data as reliable.").[9]

Second, in making this argument, Veolia relies solely on the disagreement between Dr. Specht and Drs. Huber and Hesselink. The intricacies of these differing views are detailed in Dr. Specht's declaration (and better explained by him), Specht Decl. at ¶¶18–63, but the crux of the experts' battle is that: (1) Dr. Huber and Dr.

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[9] Additionally, like the Bellwether I children, all of the lead levels for the Bellwether III children have uniformly low uncertainty values. Veolia Ex. 4, Dr. Specht BWIII Report at 7–16 (listing uncertainty values well below 10 μg/g); BWI Order at PageID.35606 (finding that the uncertainty values below 10 ug/g to be "uniformly low"). However, even if the uncertainty values were higher, this would still not be a basis for exclusion. *See Mass. Mut. Life Ins. Co. v. Residential Funding Co.*, LLC, 989 F. Supp. 2d 165, 174 (D. Mass. 2013) ("The margin of error speaks to the persuasive power of the sample, not its admissibility.") (quotation marks and citation omitted)).

Hesselink believe in the fallacy that lead must show up in a specific "lead fingerprint" and Dr. Specht does not; and (2) Dr. Huber and Dr. Hesselink do not agree that counting statistics is a valid method for ascertaining uncertainty values while Dr. Specht, his co-authors and peer reviewers, and others in the XRF field do. Specht Decl. at ¶¶18–63. In their motion, Veolia asks the Court to go beyond its gatekeeping *Daubert* duties to resolve this battle. However, "neither *Daubert* nor any of the thousands of cases applying it provide any support for [Veolia's] [] position that the Court should exclude the testimony of an expert witness because another's opinions are [allegedly] more credible." *Food Lion, LLC v. Dean Foods Co.*, No. 2:07-CV-188, 2016 U.S. Dist. LEXIS 28893, at *20–21 (E.D. Tenn. Jan. 21, 2016).

Without any support whatsoever, Veolia demands that the Court "not treat [the errors pointed out by their experts] simply as a battle of experts that the jury should resolve." Br. at 3. Meanwhile, as set forth below, the weight of jurisprudence overwhelmingly supports that this is in-fact "a classic battle of experts that is "properly fought at trial." *In re Flint Water Cases.*, No. 17-10164, 2021 U.S. Dist. LEXIS 222343, at *31 (E.D. Mich. Nov. 17, 2021).

The essence of Veolia's argument is that their experts differ in their approach as to how one should interpret the raw data delivered from the pXRF device. Courts in this Circuit have repeatedly and explicitly held that these arguments are not proper

11

for exclusion. *See Baum Research & Dev. Co. v. Hillerich & Bradsby Co.*, No. 98-72946, 2003 U.S. Dist. LEXIS 27801, at *12-13 (E.D. Mich. Sep. 26, 2003) (ruling that arguments supported by defense expert "challenging [Plaintiffs' expert's] conclusions and the way in which he gathers and interprets data from [a] Machine" constituted battle of the experts); *Bledsoe v. FCA US LLC*, No. 4:16-CV-14024-TGB-RSW, 2022 U.S. Dist. LEXIS 179594, at *50-51 (E.D. Mich. Sep. 30, 2022) ("The fact that Defendants' experts may have applied a different methodology in their analysis is insufficient to exclude [Plaintiffs' expert's] testimony.").[10]

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[10] *See also Food Lion, LLC v*, No. 2:07-CV-188, 2016 U.S. Dist. LEXIS 28893 at *20–21 (E.D. Tenn. Jan. 21, 2016) (The fact that the parties' experts **differed in their approach** to analyzing milk industry pricing did not provide basis for exclusion as it presented a classic battle of the experts) (emphasis added); *Parkway Fox v. Mass. Bay Ins. Co.*, No. 2:13-cv-02567-JTF-dkv, 2015 U.S. Dist. LEXIS 178855, at *9 (W.D. Tenn. Mar. 12, 2015) ("Defendant's arguments that . . . [Plaintiff's expert's] **techniques were flawed**, and that other [Defense] experts[] **disagree** are unpersuasive that [Plaintiffs' expert's] testimony should be excluded []" as "*Daubert* does not require that the Court look to one expert to determine the credibility of another expert's determination.") (emphasis added); *Rose v. Target Stores*, No. 2:20-cv-02205-MSN-cgc, 2022 U.S. Dist. LEXIS 31276, at *8 (W.D. Tenn. Jan. 7, 2022) (argument over which standard applied was a battle of the experts); *Ste. Michelle Wine Ests., LLC v. Tri Cnty. Wholesale Distribs.*, No. 4:22 CV 1702, 2023 U.S. Dist. LEXIS 164816, at *7-8 (N.D. Ohio Sep. 18, 2023) (ruling that experts who had differing structures in making their assessment was the "quintessential 'battle of the experts' and excluding Plaintiffs expert would terminate the case, and thus, was a drastic); *Hixon v. TVA Bd. of Dirs.*, 558 F. Supp. 3d 573, 588 (E.D. Tenn. 2021) (Defendants expert's criticism of accuracy a test designed to identify the amount of cannabis in the body constitutes battle of the experts).

The fact that Dr. Specht has provided a competing assessment of the flaws in Dr. Huber and Dr. Hesselink's analysis of his application of the MATLAB code further supports that this is a classic battle of the experts. *See Cason-Merenda v. Detroit Med. Ctr.*, No. 06-15601, 2013 U.S. Dist. LEXIS 57077, at *46 (E.D. Mich. Apr. 22, 2013) ("Similarly, to the extent that Defendants' experts have proffered a different analysis and definition of the relevant geographic market, [Plaintiff' expert] has in turn identified a number of purported flaws in this analysis, and the resulting 'battle of the experts' must be resolved by the trier of fact.") (cleaned up).[11]

The same is true for the argument that Dr. Huber's own testing of the code yielded false positives. Veolia contends that Dr. Huber tested the code using a Monte Carlo simulation, which yielded an 85% false positive rate for application of the MATLAB code. Even if this is accurate——which it is absolutely not——[12] the fact that Dr. Huber used random data "modeled" off the spectra Dr. Specht used and reached a different result is not a basis for exclusion. *See In re Nw. Airlines Corp.*,

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[11] Veolia asserts that Dr. Huber's analysis is unrebutted because Dr. Specht chose to write a short rebuttal report. Br. at 11 note 3. However, Veolia presented five (5) experts and hundreds of pages in response to Dr. Specht's report. Therefore, his decision to go through the "major points" of Dr. Huber's analysis does not mean that he does not dispute Dr. Huber's assessment. Afterall, in his rebuttal report Dr. Specht explicitly stated: "I will go through the major points below, however, I reserve the right to address each of the opinions and criticisms raised in [Dr. Huber's] reports for more fully during my testimony." Ex. E, (Specht Rebuttal Report).

[12] Dr. Specht explains the fundamental issues with Dr. Huber's Monte Carlo assessment, including that the 85% false positive rate "is completely fabricated." Specht Decl. at ¶51; ¶56.

197 F. Supp. 2d 908, 927 (E.D. Mich. 2002) ("Plainly, to the extent that Defendants and their experts have applied a similar methodology and merely reached a different conclusion, such a 'battle of the experts' must be resolved by the trier of fact."); *Wilson v. Summit Treestands*, No. 1:18-cv-294, 2021 U.S. Dist. LEXIS 222196, at *19 (E.D. Tenn. Mar. 19, 2021) ("It is does not matter that [another expert] reached a different conclusion: the Court scrutinizes methods, not conclusions.").[13]

Finally, even if all the flaws set forth by Veolia's experts are correct and Dr. Specht's MATLAB code determined lead levels or uncertainty values in an "inadequate way[,]" this still "would not justify exclusion of the evidence." BWI Daubert Order at PageID.35616 (citing *United States v. Bonds*, 12 F.3d 540, 558–560 (6th Cir. 1993)*; see also EEOC v. R&L Carriers, Inc.*, 664 F. Supp. 3d 784, 797 (S.D. Ohio 2023) ("In sum, R&L has identified definite potential shortcomings in [the Expert's] regression analysis. None of them, though, whether considered alone or in combination … prevent the EEOC from presenting the evidence to the jury. It will then be up to the jury to decide whether the EEOC or R&L has the better of the battle of the statistical experts."); *Hill v. Kia Motors Am., Inc.*, No. 4:16-cv-117, 2023 U.S. Dist. LEXIS 108731, at *48 (E.D. Tenn. June 23, 2023) ("The question

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[13] The same is true for Dr. Huber's contention that his application of Dr. Specht's methodology resulted in different lead levels and uncertainty values for some of the Bellwether III Plaintiffs.

is not whether [the expert's] opinion is correct, but whether it rests on a reliable

foundation.").

Accordingly, Veolia's challenges to "the accuracy of [Dr. Specht's]

conclusions . . . 'bear on the weight of the evidence rather than on its admissibility.'"

In re Nat'l Prescription Opiate Litig., No. 1:17-md-2804 MDL 2804, 2019 U.S. Dist.

LEXIS 141124, at *83–84 (N.D. Ohio Aug. 20, 2019) (quoting *United States v. L.E.*

Cooke Co., 991 F.2d 336, 342 (6th Cir.1993).

C.   Dr. Specht's Methodology and MATLAB Code Has Been Tested and Verified for Pediatric Use

Veolia argues that Dr. Specht's MATLAB code has not been tested to

determine whether it accurately identifies low levels of lead *in children's bones*. Br.

at 17–19. This argument is disingenuous and without merit. As an initial matter,

Veolia confuses the *Daubert* testability standard. "*Daubert* requires that an opinion

be testable, not that every expert opinion be quantifiably tested." *AmGuard Ins. Co.*

v. Fire Sys. of Mich., No. 18-11952, 2019 U.S. Dist. LEXIS 127176, at *11 (E.D.

Mich. July 31, 2019) ("[P]hysical testing of a hypothesis is not a requirement for

reliability."). Here, Dr. Specht's application of the MATLAB code to identify

pediatric lead levels is clearly testable as Veolia's expert Dr. Huber purports to have

15

tested it himself. *See, e.g.,* Br. at 15 ("Dr. Huber's testing confirmed … Dr. Huber tested the code using a common, generally accepted statistical tool …").[14]

Veolia argues none of Dr. Specht's studies validate the code for identifying lead at the low levels reported in the Bellwether III children. In support, they assert that Dr. Specht's China study concluded that an older version of the MATLAB code did not accurately measure bone lead in children; and that Dr. Specht's more recent studies show no correlation between pXRF and KXRF results for bone lead below 30 μg/g. Br. at 17–18. This is patently false. To the contrary, the study of children in China ***did not*** conclude that "that version [of the MATLAB code] did not accurately measure bone lead in children." Br. at 17. Rather, it concluded that the pXRF results gave a correlation less than expected,[15] but nevertheless, still "obtained clear results determining an individual's exposure levels." Ex. E, (Specht Rebuttal Report) at 1; Specht Decl. at ¶¶64–65. And Dr. Specht explains that: "In Zhang et al 2021, all but one individual had bone lead results less than 30 ug/g and, yet, [we] still found significant associations between KXRF and pXRF." Specht Decl. at ¶65.

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[14] As set forth above, Dr. Huber's results of these tests "provide grist for adversarial examination, not grounds for exclusion." *United States v. Gissantaner*, 990 F.3d 457, 464 (6th Cir. 2021) ("The question on the table is whether a method can be 'assessed for reliability,' not whether it always gets it right.").

[15] Veolia Ex. 10 (Specht et al, XRF-Measured Bone Lead (Pb) as a Biomarker for Pb Exposure and Toxicity Among Children Diagnosed with Pb Poisoning, 21 Biomarkers 347 (2016)) at 6 ("The portable XRF in comparison to the KXRF results gave a correlation less than what we would expect based on previous observations in adults and lab samples.").

Moreover, the Court already rejected the same argument regarding pediatric lead levels in Bellwether I. The Court ruled that any challenges to the use of pXRF to measure lead *in children* amounts to a challenge to the application of a methodology, which goes to the weight of the evidence, not admissibility. *Id.* at 35618 (citing *United States v. McCluskey*, 954 F. Supp. 2d 1224, 1251 (D.N.M. 2013) (collecting cases). This reasoning still applies, and Veolia has not set forth any reason for the Court to change its ruling on this point.

D. The Methodology Underlying the MATLAB code is Generally Accepted in the Relevant Field

Veolia argues that Dr. Specht's pXRF testing and the MATLAB code have not been accepted by anyone in the broader academic or medical community. Br. at 19–20. This is, first and foremost, a misrepresentation. As the Court previously ruled, Dr. Specht "is hardly the only researcher" applying the pXRF in vivo studies, and these studies are "informed by the protocol for KXRF devices, which have been used on human subjects for decades." BWI Order at PageID. 35617.

Additionally, Dr. Specht explained that the underlying methodology which the MATLAB code applies for lead calculation "*has been used in XRF methods for decades.*" Specht Decl. at ¶¶13–16. He also testified that the pXRF device and the *same application* of the MATLAB code being used in the Flint cases, is being used in multiple studies, currently being conducted at the Harvard Trace Metals Lab in

17

conjunction with Massachusetts General Hospital and Beth Israel Hospital. Ex C,

(Specht 2023 Dep) at 25:11–31:11.

The above is more than sufficient to meet the general acceptance prong under

Daubert as the "question for debate is 'general acceptance,' **not uniform** acceptance

within the community." *Gissantaner*, 990 F.3d at 466 (internal citations omitted)

(emphasis added).[16] Instead, "[w]hat matters is whether **the relevant scientific**

community accepts the [use of the pXRF device and MATLAB] software." (internal

citations omitted) (emphasis added). Here the MATLAB code's methodology is not

only accepted by the relevant scientific community, but it also used and applied by

that same community. Specht Decl. at ¶¶13–16.

Veolia's arguments——that Specht refers to his own publications; that he is

unaware of anyone else performing bone lead testing on children; and that

government agencies have not adopted the pXRF as a method for lead testing——

are unavailing. *See United States v. Jones*, 965 F.3d 149, 161–62 (2d Cir. 2020)

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[16] Indeed, the Sixth Circuit has held that:

> [E]ven substantial criticism as to one theory or procedure will not be
> enough to find that the theory/procedure is not generally accepted. Only
> when a theory or procedure does not have the acceptance of most of the
> pertinent scientific community, and in fact a substantial part of the
> scientific community disfavors the principle or procedure, will it not be
> generally accepted.

Bonds, 12 F.3d at 562.

(holding that a proposed expert's methodology was "generally accepted" even though the expert's laboratory was the "only laboratory" to practice it.); *In re Johnson & Johnson Derivative Litig.*, 900 F. Supp. 2d 467, 492 (D.N.J. 2012) ("[T]he Court's role under Rule 702 is to ensure that expert testimony reflects accepted standards within the relevant scientific and business communities[.]"); *People v. Kogut, 10 Misc*. 3d 314, 319–20 (N.Y. Sup. Ct. Nassau Cty. 2005) (permitting expert testimony under a Frye "general acceptance" standard where "[t]he methodology for identifying postmortem hair banding was published in 1988 and has been subject to peer review, albeit within a small community"). After all, in the Sixth Circuit's words: "Neither newness nor lack of absolute certainty in a test suffices to render it inadmissible in court. Every useful new development must have its first day in court." *Bonds*, 12 F.3d at 561 (citation omitted).[17]

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[17] Additionally, the fact the pXRF device is not FDA approved is irrelevant to whether the MATLAB code is generally accepted. *See Dyson v. Winfield*, 113 F. Supp. 2d 44, 49 (D.D.C. 2000) ("While the FDA is no doubt an organization rich with expertise, this is not a situation that suggests to the court that [the expert], by his mere disagreement with their position, is therefore a mad scientist."). Moreover, the Court has already overruled objections that the pXRF methodology could not be used because it was not FDA approved, ECF No. 2008, and Plaintiffs' experts Dr. Specht and Dr. Drues explain that the device does not need to be FDA approved for its current use. *See, e.g.,* Ex. E, (Specht Rebuttal Report).

II. DR. SPECHT'S CONSERVATIVE HALF-LIFE ESTIMATE AND COMPARISONS TO POPULATIONS FROM PRIOR STUDIES ARE RELIABLE AND VALID

Veolia takes issue with Dr. Specht's conclusion that 66% of Flint children had lead exposure profiles similar to those of the severely poisoned children from his China study. However, Veolia's objections to this conclusion do not qualify as valid grounds for exclusion of Dr. Specht's testimony on this point.

First, Veolia argues that this conclusion is unreliable because it relies on an estimate of a five-year bone-lead half-life, which they claim is unsupported and improperly assumes that the children were primarily lead poisoned in 2014–2015. However, these challenges amount to issues with the factual basis of Dr. Specht's conclusion that "bear on the weight of the evidence rather than on its admissibility." *McLean v. 988011 Ontario*, Ltd., 224 F.3d 797, 801 (6th Cir. 2000); *see also Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d 768, 791, 794 (6th Cir. 2002) (emphasizing that disputes over the strength of the factual basis of an expert's opinions went to weight not admissibility, as the opinions were "subject to vigorous cross examination and an opportunity for Defendant to introduce countervailing evidence of its own").

Nonetheless, Dr. Specht has a reasonable factual basis for his use of the five-year bone-lead half-life estimate. *United States v. L.E. Cooke Co*., 991 F.2d 336, 342 (6th Cir. 1993) ("[W]here the opinion has a reasonable factual basis, it should not be

excluded."). Dr. Specht explains that: "The five-year half-life was calculated based on known bone turnover markers identified in previous studies." Specht Decl. at ¶67. And his assumptions regarding lead exposure are also based on reasonable evidence—— "previous literature indicating that after an event where individuals identify exposure, they will intervene on exposures within their environment." *Id.* These are sufficient bases to satisfy *Daubert's* reliability factor. *See In re Whirlpool Corp. Front-Loading Washer Prods. Liab. Litig.*, 45 F. Supp. 3d 724, 757 (N.D. Ohio 2014) ("Given Rule 702's liberal policy of admissibility, [the expert] provide[d] sufficient grounds [(various sources including literature]) for the majority of his assumptions."); *Bledsoe, No. 4:16-CV-14024-TGB-RSW,* 2022 U.S. Dist. LEXIS 179594, at *51–52 ("[The expert] is allowed to make reasonable assumptions in his report when they are based on valid principles and analyses.").

Next, Veolia complains that the average bone lead level for children in Flint was actually more comparable to the lesser poisoned control group in the China study (rather than the severely poisoned group), and that Dr. Specht did not review the blood lead levels of the children in Flint. Dr. Specht, however, explains why these points do not change his conclusion. Specht Decl. at ¶¶69–71; *see In re Scrap Metal Antitrust Litig.,* 527 F.3d 51, 527 (6th Cir. 2008) (expert provided reasoned explanations for the assumptions that he made and was permitted to testify).

Overall, Veolia's objections on this point fail to attack the underlying methodology that Dr. Specht applied to draw this conclusion. Specht Decl. at ¶67 (describing the method for determining the 66% comparison conclusion). Rather, Veolia's criticisms attack the validity of his conclusion as well as the applicability of his China study——both of which fall outside the scope of a *Daubert* exclusion. *See In re Johnson & Johnson Talcum Powder Prods. Mktg., Sales Practices & Prods. Litig.,* Civil Action No.: 16-2738(FLW), MDL No. 2738, 2020 U.S. Dist. LEXIS 76533 (D.N.J. Apr. 27, 2020) ("Distilled to its essence, the dispute between the parties as to whether the studies support the experts' opinions appears to be based on competing interpretations of the studies' results and whether those results support [the expert's position]. But it is not the Court's position as gatekeeper to determine whose interpretation of the studies is correct, as long as the competing interpretations are each rooted in some sound ground.").

Finally, contrary to Veolia's argument, these opinions are not properly excluded under Rule 403. Veolia asserts that because Dr. Specht's opinion is based on "Flint children as a whole[,]" it would "inflame the jury and distract from whether the specific Bellwether III children are injured" from lead exposure during the Flint Water Crisis. Br. at 25. However, this concern is easily abated by an explanation from Dr. Specht that this average is based on the overall average of population he

22

tested in Flint, not the average of the seven Bellwether III children.[18] *In re Flint Water Cases*, No. 17-10164, 2021 U.S. Dist. LEXIS 231110, at *24 (E.D. Mich. Dec. 1, 2021) ("Where expert testimony is easily misunderstood, 'a district court...could require advocates to describe it in a way that will not generate unfair prejudice or mislead the jury.'") (quoting *Gissantener*, 990 F.3d at 470). After all, Veolia surely understands that the jury is capable of distinguishing between generalized statistics about a community versus Plaintiff specific information without causing prejudice, as most of their experts point to generalized statistics to make conclusions regarding the Bellwether III children's potential educational attainment and ability to succeed.[19]

CONCLUSION

Accordingly, Plaintiffs respectfully request that the Court deny Veolia's motion to exclude Dr. Specht's opinions its entirety.

Dated: June 17, 2024   Respectfully submitted,

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[18] As Veolia points out, Dr. Specht readily explains that the Bellwether III children has lower lead levels than the lead-exposed children in his China study. Br. at 25.

[19] For example, Veolia's economist, opines on the likelihood of educational outcomes for each of the Bellwether III children based on survey responses from individuals with similar "family structures" across the country.

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24

CERTIFICATE OF SERVICE

I hereby certify that on June 17, I electronically filed this document and its

accompanying exhibits with the Clerk of the Court using the ECF System, which

will send notification to the ECF counsel of record.

LEVY KONIGSBERG, LLP

/s/ MELANIE DALY
Melanie Daly